WHAT IS CLAIMED IS:

1. A design method for a bus system equipped with a plurality of device units, a data bus on which said device units are connectible, a timing-signal supply source for supplying a timing signal to said device units through a timing-signal bus, a bus switch for connecting and disconnecting a signal between the device unit and said data bus, and a bus-switch control part for controlling the connecting and disconnecting operations of said bus switch,

said design method comprising:

a noise propagation computation step of computing, based on a cycle of said timing signal, a signal propagation delay in the device unit, signal propagation delays in said timing-signal bus and said data bus, and a setup time in the device unit or device connected on said data bus, timing at which, when the device unit is connected on said data bus being active, noise propagates to the remaining device units other than said connected device unit or to said device connected on said data bus; and

a connection timing computation step of computing, based on said timing computed in said noise propagation computation step, connection timing at which said device unit is connected on said data bus.

2. The design method as set forth in claim 1, wherein in said connection timing computation step said connection timing is computed by computing a delay time "b" needed for said bus switch to connect said device unit on said data bus after said device unit is connected on said timing-signal bus.

3. The design method as set forth in claim 1, wherein:

in said noise propagation computation step, a timing margin M {= (T + g) - (a + b + c + d + e + f) - S} between arrival of said noise at the device units other than the connected device unit or device connected to said data bus and start of said setup time is computed as propagation timing of said noise, based on cycle "T" of said timing signal, skew "a" from said timing-signal supply source to said bus switch control part, delay time "b" of said bus switch, signal propagation delay time "c" between said bus switch control part and said bus switch, operating delay time "d" of said bus switch, pulse width (time) "e" of said noise, propagation delay time "f" of said noise in said connected device unit and said data bus, skew "g" from said timing-signal supply source to the device units other than said connected device unit or device connected on said data bus, and setup time "S" in said bus system; and

in said connection timing computation step, the

delay time "b" of said bus switch is computed so that said timing margin M is 0 or greater.

4. A bus system comprising:

a plurality of device units;

a data bus on which said device units are connectible;

a timing-signal supply source for supplying a timing signal to said device units through a timing-signal bus, a bus switch for connecting and disconnecting a signal between the device unit and said data bus; and

a bus-switch control part for controlling the connecting and disconnecting operations of said bus switch;

wherein said bus-switch control part controls said bus switch so that the device unit is connected on said data bus after a delay time "b" of said bus switch from connection of said device unit with said timing-signal bus;

and wherein, based on cycle "T" of said timing signal, skew "a" from said timing-signal supply source to said bus switch control part, the delay time "b" of said bus switch, signal propagation delay time "c" between said bus switch control part and said bus switch, operating delay time "d" of said bus switch, pulse width (time) "e" of noise caused when the device unit is connected on said data bus being active, propagation delay time "f" of said

noise in the device unit and said data bus, skew "g" from said timing-signal supply source to the device units other than the connected device unit or device connected on said data bus, and setup time "S" in said bus system, the delay time "b" of said bus switch is computed as a value such that a timing margin M {= (T + g) - (a + b + c + d + e + f) - S} from arrival of said noise at the device units other than the connected device unit or said device to start of said setup time is 0 or greater.

5. A device unit connectible to a printed-circuit board equipped with a data bus, a timing-signal supply source, and a timing-signal bus connected to said timing-signal supply source, comprising:

a bus switch for connecting and disconnecting a signal between said device unit and said data bus; and

a bus-switch control part for controlling the connecting and disconnecting operations of said bus switch;

wherein said bus-switch control part controls said bus switch so that the device unit is connected on said data bus after a delay time "b" of said bus switch from connection of said device unit with said timing-signal bus;

and wherein, based on cycle "T" of said timing signal, skew "a" from said timing-signal supply source to said bus switch control part, the delay time "b" of

said bus switch, signal propagation delay time "c" between said bus switch control part and said bus switch, operating delay time "d" of said bus switch, pulse width (time) "e" of noise caused when the device unit is connected on said data bus being active, propagation delay time "f" of said noise in the device unit and said data bus, skew "g" from said timing-signal supply source to device units other than the connected device unit or device connected on said data bus, and setup time "S" in said bus system, the delay time "b" of said bus switch is computed as a value such that a timing margin M {= (T + g) - (a + b + c + d + e + f) - S} from arrival of said noise at the device units other than the connected device unit or said device to start of said setup time is 0 or greater.